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Fall 9-1-2018

ANTY 510.01: Seminar in Human Variation & Evolution

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Snow, Meradeth H., "ANTY 510.01: Seminar in Human Variation & Evolution" (2018). *Syllabi*. 8024.
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Anthropology 510
Seminar in Human Variation and Evolution
Fall 2018
Thursdays 2-4:50pm in SS 252

Contact Information

Instructor: Meradeth Snow
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Office: 219 Social Sciences
Office hours: Tuesdays 1-3pm & by appointment

Course Texts

Crawford, Michael.
2007 Anthropological Genetics: Theory, Methods, and Applications. Cambridge University Press.

Course Description

This course is designed to explore the historical and current theories that form the foundation for Molecular Anthropology and how it is encompassed within Physical Anthropology. We will be covering many broad topics that are central to current anthropological research and investigating how genetic data has allowed us to refine our understanding of modern humans and our evolution.

The class will combine presentations and discussions by students in a seminar format. Lectures/presentations and discussions are intended as a means for students to learn what practicing biological anthropologists do and highlight some of the major questions in the field of molecular anthropology today. They also allow for student to hone skills in public speaking and lecture preparation that will aid them in future employment.

Course Goals

There are three main goals for this course:

1. Develop skills and experiences necessary for professional academic development.
2. Acquire knowledge regarding the major issues, questions, theories, and methods in the field of molecular and biological anthropology.
3. Develop fundamental research, reading, and writing skills.

Course Grade Breakdown

| | |
|--------------------|---------------------------------|
| Leading discussion | 40% (broken down between weeks) |
| Research Paper | 35% |
| Participation | 25% |

Course Requirements

Leading discussion: One of the most valuable tools you can leave graduate school with is the ability to put together and deliver a lecture for peers, colleagues, and/or students. To that end, I will be providing a list of topics you will be required to sign up for. Topics will be centered on molecular anthropology and should be something that you are interested in.

The week prior to your presentation, I will give a ~30 minute overview of the subject in order to ensure everyone is up to speed on what the topic is, prior to our student-led discussion of it.

Your presentation should include:

- Rundown of particularly onerous jargon not previously covered
- Discussion of relevant background or foundational ideas
- Where the topic currently sits in terms of research
- Conflicts or debates within the field
- Handouts for your classmates of the slides/notes that you utilize
 - If you would like these printed for you, you must email them at least two hours before class!
- A list of resources utilized, to be handed in to your professor upon completion
- **Your presentation should be interactive and engaging for fellow students.**
 - This could include, but is not limited to: creating phylogenies from related objects (candy bars work great!), creating a video/podcast, playing a game related to the concepts, hands-on with casts/fossils, or other means of drawing student engagement. Please consult your professor for aid or guidance!

In preparation for each lecture I will provide the class with relevant readings from the textbook and journal articles. Everyone is required to read these assigned readings and type up relevant notes and at least two questions for each reading. These will be used for participation as noted below.

Those who are presenting should use the list as a jumping-off point to delve further into the topic through articles, books, and other available resources; expect to read deeply into the area. If you need help finding resources, please ask your professor.

Due to the number of students enrolled and the number of topics, you may need to work in pairs or small groups for your presentation. Please be amenable to your fellow group members and divide the work up as evenly as possible. If problems arise, please speak with your professor in order to ensure credit is accurately distributed.

Research paper: you will be required to write a paper on the migration and peopling of a particular region/country (please keep your region limited). It is preferable that you select a region that you personally find interesting, or that is related to other coursework or research. A region should be chosen by the **fourth week** of class and submitted to your instructor at that time. Duplicate topics between students will not be allowed, so selecting early is in your favor.

Your topic should address the prehistoric and historic migration into a particular area. You are welcome to utilize information gathered through multiple lines of evidence, but the bulk of your

research should address the genetic/molecular evidence (>**50% of your supporting arguments!**). Through your research you should form an argument regarding the peopling of the region and use your paper to support this theory, while noting the potential for debate.

The paper itself should be ten full pages in length, 12pt Times font, with one-inch margins, double spaced. The ten pages do not include your Works Cited, which should be in Chicago Manual of Style format. Papers are due on the last day of class; late papers will not be accepted.

During our final meeting, each student will be asked to present their research briefly to the class. You will be asked to note the main source of evidence for your argument, as well as your conclusion of how individuals arrived and settled in the area you researched.

Participation: In order to be prepared for each lecture you should read all of the assigned readings (both the textbook and articles) before class and take notes. While reading, pay particular attention to the main questions being asked, what theoretical background is being addressed, terms and concepts, and any critical omissions or questions regarding the work.

In order to obtain full participation credit, you will need to *submit a short paragraph or bulleted list that reviews **each** of the assigned readings and provides two possible discussion questions for each.*

Code of Academic Misconduct

With regard to academic dishonesty, this class has a zero-tolerance policy and will promptly deal with any acts included therein (cheating, plagiarism, or unauthorized help on assignments, etc.) according to university policy. For further information on what falls into these categories see: http://life.umt.edu/vpsa/student_conduct.php. If you have questions or concerns, please feel free to contact the instructor.

Students with Disabilities

Students with disabilities may request reasonable modifications by contacting me. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students (DSS). “Reasonable” means the University permits no fundamental alterations of academic standards or retroactive modifications. (For other options see <http://www.umt.edu/disability>).

| Week & Date | Topic | Book Readings |
|------------------------|-----------------------------------|------------------------|
| 1. August 30 | Introduction & scheduling | |
| 2. September 6 | Basic DNA introduction | Crawford chapter 5 |
| 3. September 13 | DNA catch-up and hands-on time | |
| 4. September 20 | History of Molecular Anthropology | Crawford chapter 1 & 6 |
| 5. September 27 | Evolution & Speciation | |
| 6. October 4 | Mitochondrial & Y-Chromosome DNA | |
| 7. October 11 | Human Origins & Hominin Relations | Crawford chapter 12 |
| 8. October 18 | Human Diaspora | |
| 9. October 25 | Ancient DNA | Crawford chapter 8 |
| 10. November 1 | Selection on Modern Humans | Crawford pg 462 |
| 11. November 8 | Ancestry | |
| 12. November 15 | Molecular Forensic Approaches | Crawford chapter 9 |
| 13. November 22 | No Class (Thanksgiving) | |
| 14. November 29 | Personal Genome Analysis & Ethics | |
| 15. December 6 | Student Presentations on Papers | |